



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/825,837

04/15/2004

Jeffrey A. Gohman

IFC 374

9448

50488

7590

07/22/2005

ALLEMAN HALL MCCOY RUSSELL & TUTTLE LLP  
806 SW BROADWAY  
SUITE 600  
PORTLAND, OR 97205-3335

EXAMINER

SEVER, ANDREW T

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Sm

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/825,837	GOHMAN, JEFFREY A.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Andrew T. Sever	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/2004, 5/2004</u>   | 6) <input type="checkbox"/> Other: ____                                     |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6, 8, 9, and 11-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuwa et al. (US 6,624,952.)

Kuwa teaches in figure 4 an apparatus for projection display, the apparatus comprising:

An image generation device (PA) configured to generate an image;

A wide angle lens system (GrR and GrF) having an optical axis configured to receive the image and project the image along an optical path for display above the apparatus; and

Direction changing optics (PR) configured to fold the optical path such that the optical path changes direction from a first direction to a second direction; the image generation device is positioned below the optical axis of the wide angle lens system (the optical axis is that of GrF since it faces a different direction and is off axis of that of PA; the image generation device is clearly positioned below the optical axis of the wide angle lens system).

*With regards to applicant's claim 2:*

GrR is a relay lens stage while GrF is a wide-angle lens stage.

*With regards to applicant's claim 3:*

See column 6 lines 36-59 which teach that the pre-distortion system is the first stage (GrR), which includes the relay lenses.

*With regards to applicant's claim 4:*

Although the optical axis is bent between the wide angle lens system and the relay lens system, essentially the lens systems are the same optical axis in a the same way that applicant teaches in paragraph 28 of the current specification that lenses 315 and 345 are aligned in figure 3 of applicant's drawings.

*With regards to applicant's claim 6:*

As can be seen in figure 4, if the first direction is considered to be toward the front of the projection device, the second which is at an angle greater then 90 is toward a rear of the projection display device (the vector of the light beam includes components that are the opposite of components of the vector of the first direction.)

*With regards to applicant's claim 8:*

Clearly the two planes are not the same and at least part of the first plane is above the second plane.

Art Unit: 2851

*With regards to applicant's claims 5, 9, 11, and 12:*

See above, the second direction and first direction meet the claimed limitation of being substantially opposite (wherein substantially opposite is being held to be any angle between 270 and 90 degrees, at least part of the vector is substantially opposite.)

*With regards to applicant's claim 13:*

See column 1 lines 9-14 that teach the projection optical system of Kuwa is part of a projection device.

*With regards to applicant's claim 14:*

See above with regards to applicant's claim 6.

*With regards to applicant's claim 15:*

Since in figures 5 and 6 the projection device is disclosed to be a rear projection device and the body is position substantially adjacent the viewing surface, inherently a minimum throw distance of the lens system is achieved to the viewing surface (otherwise the image would be distorted at best.)

*With regards to applicant's claims 16-20:*

See above.

*Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwa et al. as applied to claims 1-6, 8, 9, and 11-20 above, and further in view of Cotton et al. (US 6,485,145.)

As described in more detail above Kuwa teaches a projection display device that among other things includes a wide angle lens having two stages wherein the angle between the first and second stage forms an angle of 90 degrees or more, however Kuwa does not teach the use of fold mirrors, especially two of them. Cotton teaches in figure 2 two fold mirrors (32) for redirecting the light substantially 180 degrees from the projection device. Cotton teaches in column 3 lines 50-63 that such a display system allows for an ultra thin panel compared to a lesser angle as taught in the figures of Kuwa. Accordingly it would have been obvious to one of ordinary skill in the art at the time the invention was made to use two fold mirrors as taught by Cotton to redirect the light path at an angle of 180 degrees in the wide angle projection system of Kuwa, as this allows for a smaller display.

***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-14 and 16-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 3, 16, and 17 of copending Application No. 10754093 in view of Cotton et al. (US 6,485,145).

Claims 3, 16, and 17 as nearly as can be understood of '093 claim an apparatus for a projection display with an inherent image generation device (in order to have an image something must generate it) a wide angle lens system, a relay lens system, and a direction changing optics, however those direction changing optics are not claimed in '093 application. As taught by Cotton in figure 2 a reflection based wide-angle projection system (32) can be made to be redirected by an angle of 180 degrees, with two fold mirrors (a redirection device). Cotton teaches in column 3 lines 50-63 that such a display system allows for an ultra thin panel. Accordingly it would have been obvious to one of ordinary skill in the art to use the fold mirrors of Cotton as a redirection device in the '093 application.

This is a provisional obviousness-type double patenting rejection.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 2004/0227990 to Peterson et al. is a CIP of 10/222/083 of which the present application is also a CIP of. This application should be reviewed for possible double patenting and/or 35 U.S.C. § 102(e) type rejections.

US 6,652,104 to Nishida et al. teaches in figure 4 a projector having a two part projection lens.

US 6,111,701 to Brown teaches in figure 1 a projection lens that is redirected.

US 6,144,503 to Sugano teaches a projector 5 teaches a redirected projection lens system.

US 6,188,523 to Choi teaches an off axis projection lens unit for a projector in figure 2.

US 6,493,032 to Wallerstein et al. teaches in figure 1 a projection device that uses a convex mirror as a wide angle lens stage, said mirror also redirecting the image light.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 9:30-6:00.



Art Unit: 2851

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS



**William Perkey**  
**Primary Examiner**